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LXXVII. *An Account of an extraordinary Disease of the Skin, and its Cure. Extracted from the Italian of Carlo Crusio ; accompanied with a Letter of the Abbé Nollet, F. R. S. to Mr. William Watson, F. R. S. by Robert Watson, M. D. F. R. S.*

Read May 16, 1754. **T**HE disease, which lately befel a young Neapolitan woman, being of an extraordinary nature, greatly excited the curiosity of the governors of the royal hospital at Naples. These gentlemen engaged Signor Crusio, the physician of that hospital, to whose care this patient was committed, to draw up a faithful relation of the case. The Abbé Nollet, of the Royal Academy of Sciences at Paris, being desirous of having an authentic account of what he had heard had been so much the subject of discourse at Naples, procur'd by his friends from Signor Crusio a transcript of this relation ; and, believing it not unworthy of attention, transmitted it to London. In a letter to Mr. William Watson, the Abbé Nollet assures him, that the relation contains nothing but what is true ; “ because, says he, I have been inform'd of the fact by disinterested persons, and because I know the writer of it to be a man of too much honour to be capable of attempting to impose upon any one.”

The history of the disease is as follows.

A Young woman, seventeen years old, call'd Patrizia Galiera, the daughter of a citizen of Naples, was brought to the royal hospital the twenty-second of June, 1752. and was placed in one of the wards assigned to the care of Dr. Crusio ; who visiting her in her bed, and asking her the necessary questions to form a right notion of her disease, was inform'd by her, that her complaint was an excessive tension and hardness of her skin over all her body, by which she found herself so bound and straiten'd, that she could hardly move her limbs. Upon examining her, he found her skin hard to the touch, like wood, or a dry hide ; however, he observ'd some difference in the degrees of the hardness: For in some places it was greater ; as in the neck, forehead, and particularly in the eye-lids ; insomuch that she could neither raise nor intirely shut them. It was also very great in the lips, tongue, and on each side of her body ; but the muscles under the skin seem'd not to be affected, because the joints could be bent ; and if in any place there was any difficulty in moving the limbs, this arose not from any defect in the muscles, but from the hardness and tension of the skin and cellular membrane, which did not yield to their contraction and relaxation. For example ; she could scarce open her mouth ; which happen'd not from any fault in the digastric, or other muscles, but from the hardness of the skin, that cover'd the lips and cheeks, and that would not permit her to draw down the lower jaw. In the same manner was she incapable of bending her neck, or turning her head : Neither did this happen from any defect in the muscles

muscles destin'd to that office, but from the firmness of the skin and membrane, which in no wise yielded to their contraction. This was the case in the other parts of the body; the muscles being, as it were, tied down and compressed by a dry, hard, and unpliant covering.

As to other particulars; her skin had lost its natural warmth, but was sensible, when it was press'd upon by the nails, or a pin; the patient then saying, that she felt a pain, as if the skin were tearing. Her pulse was perceiv'd to be deep, and obscure; but equal, and regular. Her respiration was free, and uninterrupted; her digestion was good, and she found no inconvenience after eating, except a greater straightness, and an uneasy constriction round the belly. As to the natural excretions, the alvine were easy and proper; but the urinary sometimes exceeded the quantity of what she drank, and appear'd loaded with salts; both which circumstances, perhaps, proceeded from the sensible and insensible perspiration being intirely wanting. For upon her being ask'd, whether she ever sweated, she answer'd, that she did not, tho' she was ever so much exercis'd and fatigu'd. Her sleep was natural; she had never had the menstrual evacuation. She said, her disorder began first in her neck, which she perceiv'd she could not move as usual; then she found the skin of her face and forehead to grow hard; and so successively, from day to day, she saw and felt all the external parts of her body grow hard, and tense. She never had had any other disease except a little fever some years before, nor had ever been suddenly or excessively frighten'd.

So extraordinary a disorder did not a little disconcert the gentleman, to whose care the cure of it was committed. He judged, that it would be very difficult, and almost impossible, for him to restore the patient to a perfect state of health, not only on account of the uncommon nature of the complaint, but because he could not learn, from the relation of the sick, any proximate or remote cause of the disease, by which he might be directed to the application of a proper and efficacious remedy. For tho', on first considering the case, the want of the menstrual discharge might appear to have been the occasion of it; yet as there are many women, who live in perfect health, and conceive, without ever having had this evacuation; the want of it, in this case, could not be suppos'd an adequate cause; and this the event afterwards shew'd, since the patient was cur'd without ever having had the natural discharges of the sex.

The indication then of cure was to be taken from the present state of the disease. The skin was observ'd to have lost its natural softness and flexibility; was become hard, contracted, and imperspirable. Wherefore it was not unreasonable to conclude, that the immediate cause of such a morbid change was a preternatural contraction of the nervous or fibrous parts of the skin, by which its excretory ducts and exhaling vessels were constricted, and did not supply a due quantity of the oily and aqueous fluids necessary to soften and lubricate the parts. Now for want of these fluids, the coriaceous fibres of the skin, the nervous *papillæ*, the *corpus mucosum*, the absorbing and exhaling vessels, and the cuticle, could not but collapse, coalesce, grow rigid, dry, firm, and hard:

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And certainly leather, which, in its hardest and driest state, bears a near resemblance to the diseas'd skin of this young woman, does not lose its original softness; but either by being simply depriv'd of those juices, which moisten'd its component parts, or else by the coagulation and inspissation of some of the fluids lodged in the vessels; which last circumstance perhaps likewise contributed its share to the hardness of the skin in the present case.

On these considerations it was thought fit to put the patient into a bath of warm milk and water, and to direct her to stay in it a considerable space of time, that the warmth and moisture might relax and soften the hardness of her skin: But she could not bear to continue in the bath, on account of the great oppression and anxiety, which it occasion'd, and because the troublesome constriction of her skin was much increased by it. She was therefore put to bed, and well cover'd with cloaths, in hopes to promote a sweat; but all was in vain; for her skin remain'd as hard and dry as before. However, this treatment was repeated for six days; but, on going into the bath for the seventh time, she was seiz'd with convulsions in the muscles of her legs and arms. This was very unexpected, and made it necessary to discontinue this method of cure. But as it was imagin'd, that it was the weight and pressure of the water, which gave her so much uneasiness, a method was thought on, to avoid this inconvenience, and, at the same time, to procure for the patient the benefit, that might arise from the relaxation and softening of the skin and pores by the absorption of an external humidity, which was judged to be necessary to the cure. Now the

the vapour of warm water hath a great power of insinuating itself into the pores, and between the fibres, of bodies; and, by that means, of relaxing and softening the hardest substances, as is observ'd in dry leather; which, suspended in the steam of boiling water, becomes much more soft and pliable, than if it had been immers'd for a longer time in the hot water itself. A vapour bath was therefore order'd, and contriv'd in such a manner, that the steam of the boiling water might intirely surround the body of the patient, or be directed to any particular part, as occasion should require. She bore the vapour without any inconvenience, and was constantly kept in bed in the intervals between the several applications of it. The sixth time of using this kind of bath, she began to perspire a little, and, from day to day, the perspiration grew more general, and at last universal: Then the skin began to be less rough, but not less hard; and the urine was more thin and diluted than before. Her diet was prescrib'd to be of the most soft and relaxing nature, and principally consisted of whey. As she was judg'd to be of too full a habit, and as she had not the regular menstrual discharge, she was order'd to lose twelve ounces of blood from the foot; and it was thought, that this evacuation might contribute to produce a general relaxation, and, by consequence, make the circulation of the blood, and other fluids, more free and easy through their respective canals. It was surprizing to see what difficulty the surgeon found in opening the vein, on account of the hardness of the skin; insomuch that, in the operation, the lancet yielded, and bent. However, at last, it pierced the skin, and the vein, but not without a  
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good deal of pain to the patient. The blood issu'd forth with great impetuosity, and the wound was some time before it heal'd; but, at length, it form'd an elevated and hard scar.

By continuing the emollient diet and vapour bath, in about forty days the skin of her legs began to grow soft; in which part, according to the relation of the patient, the hardness last shew'd itself. But as often as she expos'd herself to the fresh and cool air, the skin, which had begun to grow soft and flexible, was observ'd to grow again hard, and imperspirable. It was therefore thought proper, towards the end of September, to place her in a warm room, where the air was kept of an equal degree of heat. This had the desir'd effect: For by staying in her room, and from time to time repeating the vapour bath, and by drinking, at her meals, a decoction of the woods, the perspiration was constant and moderate; and the softness of the skin, which began in the legs, extended itself upwards, and was in some degree perceptible in the arms.

Five months were now elaps'd since the beginning of this treatment, when it was believ'd, that, without some more efficacious medicine, capable, by its motion, weight, figure, and divisibility, of circulating with the blood, and of penetrating into the most remote and subtil recesses of the vessels, it would be impossible to resolve and open the obstructions, which were form'd in the vascular structure of the skin, and which, by hindering the fluids from circulating thro' their respective canals, had depriv'd them of that humidity, which nature hath made necessary for their flexibility and softness. It was therefore thought pro-



per to make her take small doses of pure quicksilver; and that the mercury might the more easily be determin'd to the skin, the patient was order'd to be constantly kept in a warm air, to have the surface of her body rubb'd with a flannel, and to continue the use of the vapour bath. But, by way of preparation for this mercurial course, she was gently purged, and blooded a second time, that the plenitude being diminish'd, the mercury might better circulate through the finest vessels. Here it is to be observ'd, that the surgeon, in this second blood-letting, did not meet with that resistance, in piercing the skin, which he had experienced in the first. The patient, thus prepar'd, began in December, 1752. to take daily six, and afterwards twelve, grains of pure quicksilver, in a drachm of cassia, drinking after it half a pint of a decoction of sarsaparilla. In this course she continu'd four months with cheerfulness, and without any inconvenience; and within two months from the beginning of it there appear'd a somewhat viscid sweat, and the skin grew more flexible, and yielding. About the end of March, 1753. she had an efflorescence over all her skin, which, by degrees, became pustular, and was very troublesome by its heat and itching. The use of mercury was then discontinu'd, and she took no medicine but half a pint of an infusion of sarsaparilla in the morning, and an emulsion of melon and poppy-seeds in the evening. Then the heat and itching abated, and the pustules suppurated. Signor Crusio says, that he had the pleasure to see many small globules or particles of mercury separated in the ripe pustules. This is something so unusual and surprising, that we shall scarce be inclined to give

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our assent till we are forced to it by farther experience and observation; especially as we know, that the most careful and sensible men are frequently mistaken; but that it is very rare, that any thing happens out of the ordinary course of nature.

About the middle of May following, her skin was quite clear of pustules, and was become perfectly soft and flexible, being capable of being mov'd, rais'd, extended, and of performing all its natural functions. This softness and flexibility of the skin was general, except in the forehead and lips; which, however, afterwards recover'd their natural state.

But there still remains an unusual degree of tension in some of the muscles, which lie immediately under the skin, particularly in those of the hand and radius; on which account, a milk diet is prescrib'd, to supply the blood with a proper matter for filling the cells of the adipose membrane; which membrane, by having sustain'd a long pressure between the diseas'd skin and muscles, is become depriv'd of its proper mucilaginous and oily juices, design'd by nature to keep the parts soft and flexible, and to facilitate the motion of the muscles. Now when, by a fit diet, the oily and mucilaginous particles shall again abound in the blood, they will, since the morbid pressure of the skin is remov'd, be deposited in their proper cells, and, by that means, it is hop'd, that the affected muscles, which every day grow less tense, will soon be restor'd to their natural state; and that the cure will be as complete, with respect to them, as it already is with regard to the skin.